

## REMARKS

Applicants request favorable reconsideration and allowance of the subject application in view of the preceding amendments and the following remarks.

Claims 48-58 and 60-62 are presented for consideration. Claim 48 is the sole independent claim. Claims 48-50, 52, 55, 56, 58 and 60-62 have been amended to clarify features of the subject invention. Support for these changes can be found in the original application, as filed. Therefore, no new matter has been added.

Applicants request favorable reconsideration and withdrawal of the rejections set forth in the above-noted Office Action.

Claims 48-54 and 60-62 were rejected 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,746,562 to Hasegawa et al. Claims 55-58 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Hasegawa et al. patent in view of U.S. Patent No. 6,319,322 to Ueda et al. These rejections are respectfully traversed.

Independent claim 48 recites an exposure apparatus for exposing a wafer to a pattern. The apparatus includes a chamber in which an atmosphere is conditioned to be different from an atmosphere in another apparatus outside of the exposure apparatus and the wafer is exposed to the pattern, the atmosphere in the chamber is purged with an inert gas, and a port section through which the wafer is transferred between the chamber and the other apparatus, the port section having a load-lock mechanism including a vacuum mechanism for creating a vacuum below atmospheric pressure inside of the port section and a supply mechanism for supplying the inert gas to the inside of the port section.

Applicants submit that the cited art, whether taken individually or in combination, does not teach or suggest such features of the present invention, as recited in independent claim 48.

The Hasegawa et al. patent relates to a processing system that includes first and second chambers, each for accommodating a processing apparatus therein, each chamber being able to be kept gas-tight, a coupling member for coupling the processing apparatuses accommodated in the first and second chambers with each other, and an elastic gas tightness holding member for gas-tightly sealing portions between the coupling member and the first and second chambers.

In the X-ray exposure apparatus of the Hasegawa et al. patent, exposure is performed in an ambience of a vacuum or reduced pressure helium, since it is known that X-rays are largely attenuated in air. This is discussed in more detail in the Hasegawa et al. patent at column 1, lines 14-23. Thus, the Hasegawa et al. patent merely teaches that which is well known in the art, *i.e.*, that a load-lock mechanism should be utilized in order to maintain a vacuum state inside a vacuum chamber containing an X-ray exposure apparatus.

In marked contrast to the device shown in the Hasegawa et al. patent, in the present invention, a chamber is provided in which an atmosphere is conditioned to be different from an atmosphere in another apparatus outside of the exposure apparatus and the wafer is exposed to the pattern. In the present invention, the atmosphere in the chamber is purged with an inert gas.

On the other hand, in the Hasegawa et al. patent, an atmosphere in the process chamber 1 is merely at an exposure ambience of a vacuum or reduced pressure helium. Thus, the Hasegawa et al. patent does not teach or suggest that the atmosphere in the process chamber 1 be purged with an inert gas, in the manner of the present invention recited in independent claim 48. Accordingly,

the Hasegawa et al. patent does not teach or suggest at least this salient feature of Applicants' present invention, as recited in independent claim 48.

As discussed above, the present invention provides an exposure apparatus having a chamber being purged with an inert gas, which is different from vacuum chamber. Still further, the present invention includes a port section through which a wafer is transferred between the recited chamber and the other apparatus, the port section having a load-lock mechanism including a vacuum mechanism for creating a vacuum below atmospheric pressure inside of the port section and a supply mechanism for supplying the inert gas to the inside of the port section. Applicants further submit that the Hasegawa et al. patent does not teach or suggest the salient features of the port section of Applicants' present invention, as recited in independent claim 48.

For the reasons noted above, Applicants submit that the Hasegawa et al. patent does not teach or suggest many features of the present invention, as recited in independent claim 48.

Applicants further submit that the remaining art cited fails to cure the deficiencies noted above with respect to the Hasegawa et al. patent.

The Examiner relies on the Ueda et al. patent for showing a substrate processing apparatus including an aligner process chamber that includes a temperature control mechanism and a port section that includes a temperature control mechanism, which is at least one of a heater and a cooler. Applicants submit, however, that the Ueda et al. patent, as with the Hasegawa et al. patent, does not teach or suggest the salient features of Applicants' present invention, as recited in independent claim 48, which have been discussed above. Namely, that patent does not teach or suggest a chamber in which an atmosphere is conditioned to be different from an atmosphere in

another apparatus outside of the exposure apparatus and the wafer is exposed to a pattern, the atmosphere in the chamber being purged with an inert gas. Still further, the Ueda et al. patent does not teach or suggest a port section having a load-lock mechanism including a vacuum mechanism for creating a vacuum below atmospheric pressure inside of the port section and the supply mechanism for supplying inert gas to the inside of the port section. Accordingly, the Ueda et al. patent adds nothing to the teachings of the Hasegawa et al. patent that would render obvious Applicants' present invention recited in independent claim 48.

For the foregoing reasons, Applicants submit that the present invention, as recited in independent claim 48, is patentably defined over the cited art.

Dependent claims 49-58 and 60-62 also should be deemed allowable, in their own right, for defining other patentable features of the present invention in addition to those recited in independent claim 48. Further individual consideration of these dependent claims is requested.

Applicants submit that the instant application is in condition for allowance. Favorable reconsideration, withdrawal of the rejection set forth in the above-noted Office Action and an early Notice of Allowance are also requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010 All correspondence should continue to be directed to our address given below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Steven E. Warner", is written over a horizontal line.

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